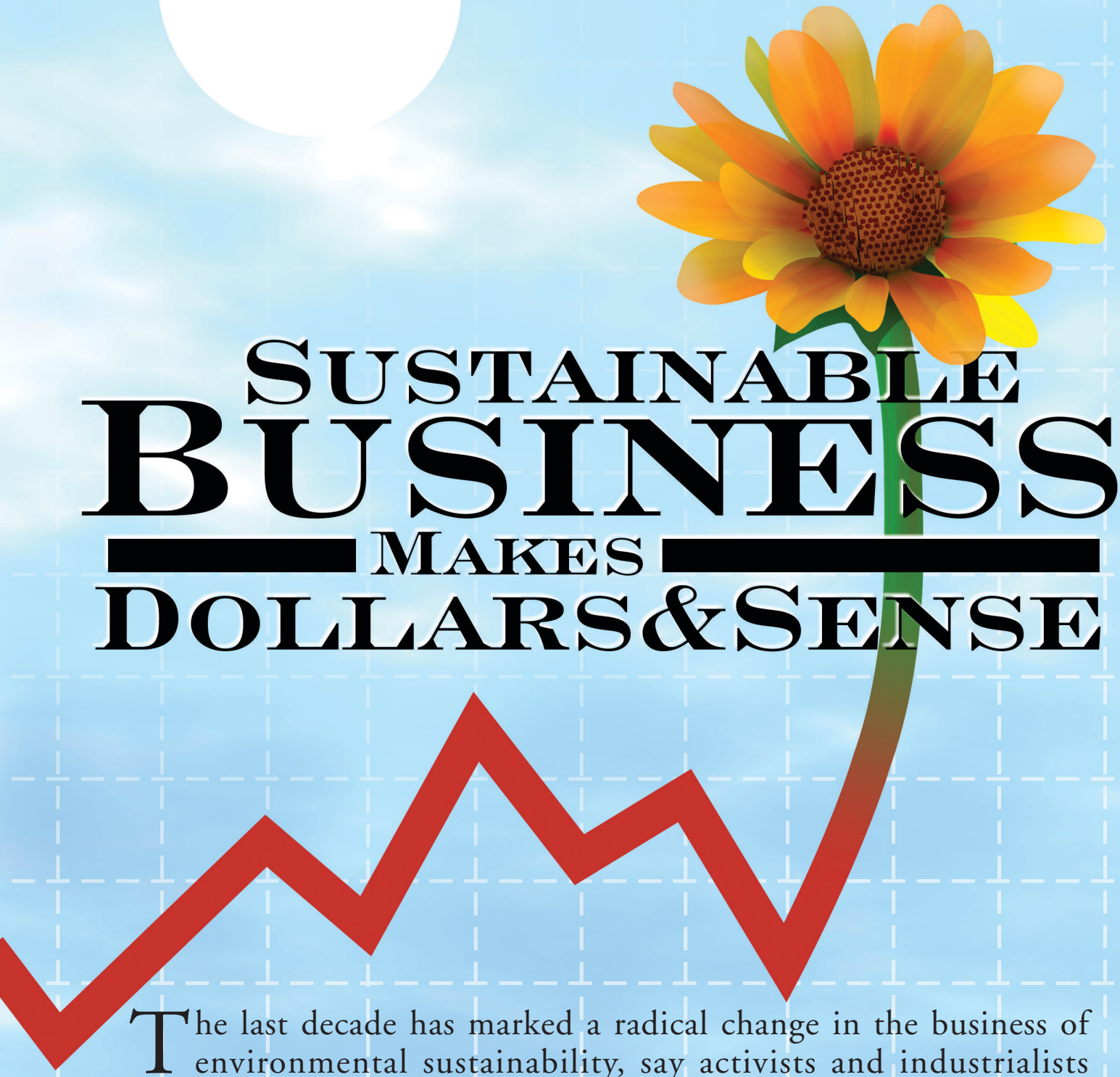

SUSTAINABLE BUSINESS MAKES DOLLARS&SENSE

The last decade has marked a radical change in the business of environmental sustainability, say activists and industrialists alike. On the wane—albeit far from extinct—are "greenwashing" campaigns in which corporations promote sometimes dubious environmental accomplishments to draw attention away from environmentally damaging practices. On the rise are corporate investments in sustainability programs, new types of environmental markets, and public demand for "green" products.

Christopher G. Reuther/EHP

"We've seen within the last two or three years that there is a real shift in this whole sustainability debate," says John Elkington, chairman of the London, England, environmentalist group SustainAbility. This shift, he says, has reached the top levels of multinational corporations, which are adding fuel to an economic movement called alternatively the "green economy," the "new 'new economy,'" or the "next industrial revolution."

The Next Industrial Revolution

Although the green economy is too new and loosely defined to measure directly, reliable indicators of its accelerating growth do exist, says Allen White, business and sustainability group director for the Tellus Institute of Boston, Massachusetts, a nonprofit organization dedicated to environmental stewardship and equitable development. Each year, for example, more corporations—including such behemoths as Ford Motor Company, Intel, and Dow Chemical—publish sustainability reports. That number has increased dramatically from maybe two dozen in 1990 to the order of 300–400 environmental reports or environmental and sustainability reports currently produced in the United States, White says. "And those reports continue to increase every year, to the tune of fifty to seventy-five new reports each year in the United States alone. Worldwide it's much higher."

Such sustainability reports vary widely in terms of content. According to the Canadian group The Sustainability Report, which is affiliated with York University, content can range from sketchy anecdotal information (which may indicate that a company is new to sustainability) to detailed, data-filled reports. Some of these reports focus on environmental standards compliance. Some are integrated into annual reports, while others are separate documents. The content of the sustainability reports is not nearly as standardized as that of annual reports, and the most that can be said is that they are documents that describe a company's environmental, and sometimes social responsibility, efforts. Says White, "By creating a public disclosure instrument for themselves, [companies are] mining that opportunity to present themselves as leadership companies."

Although inspection of the individual reports is the only real way to distinguish them from greenwashing—and many environmentalist groups do scrutinize them—businesses contend that such reports describe real, robust programs. Sustainability reports also aren't effective greenwashing devices because they aren't printed in mass quantities; mass communication venues such as TV and print advertising are the traditional conduits for greenwashing programs.

Other indicators of the growth of the green economy include increases in the number of companies that have undertaken certification for ISO 14000—a suite of environmental practices prescribed by the International Organization for Standardization (ISO)—and increases in the amount of money invested in "socially responsible investment" (SRI) funds.

Sustainability is really social responsibility. You can't be **socially responsible** and unsustainable.

—Catherine Greener, Rocky Mountain Institute

According to the ISO, 14000 standards "include the need for sites to document and make available to the public an environmental policy. In addition, procedures must be established for ongoing review of the environmental aspects and impacts of products, activities, and services. Based on these environmental aspects and impacts, environmental goals and objectives must be established that are consistent with the environmental policy. Programs must then be set in place to implement these activities. . . . [I]nternal audits of the EMS [environmental management system] must be conducted routinely to ensure that non-conformances to the system are identified and addressed. In addition, the management review process must ensure top management involvement in the assessment of the EMS, and as necessary, addressing need for changes." According to an ISO survey, in 1996 just 34 U.S. companies had ISO 14000 certification. By 2000 that number had grown to 1,042. The change worldwide was from 1,491 in 1996 to 22,897 in 2000.

Investment in green funds has grown almost as quickly, according to the Social Investment Forum, a nonprofit organization based in Washington, D.C., that promotes socially responsible investing. In 1985 there were four SRI mutual funds, from which companies engaged in practices such as selling tobacco products, producing firearms, and maintaining environmentally destructive policies were screened out. Ten years later there were 55 SRIs, in 1997 there were 144, and by the end of 2001 there were 230. "It's estimated now that about thirteen percent of all assets under management in the United States are of a so-called screened nature," White says.

Such screened funds limit their investments to companies whose policies or products meet social goals such as low impact on the environment, fair treatment of indigenous peoples, and refusal to produce inherently dangerous materials. The specific goals that are used to screen out companies vary from fund to fund. And although these funds define *socially responsible* in a number of ways, sustainability is invariably part of the mix. "Sustainability is really social responsibility," explains Catherine Greener, commercial and industrial practice leader for the environmentalist Rocky Mountain Institute of Snowmass, Colorado. "You can't be socially responsible and unsustainable."

Increasing business acceptance of green principles is reflected by a marked increase over the last few years in the number of articles about sustainability in mainstream business journals such as the *Harvard Business Review*, says Sissel Waage, director of the sustainability research group for The Natural Step, an international nonprofit organization based in San Francisco, California. Also influential are works by such theorists as Karl-Henrik Robèrt, who created the "Natural Step Framework." The Natural Step Framework supplies a suite of processes that are intended to guide organizations toward sustainable practices. These processes are meant to help organizations

perceive the unsustainable nature of current business practices and the inherent benefits of converting to sustainability.

Robèrt in turn influenced Paul Hawken, Amory Lovins, and L. Hunter Lovins, who developed the concept of "natural capitalism," in which human and natural capital—environmental resources—are viewed as a finite resource rather than a limitless, free supply. As such, future economic well-being requires that all forms of capital—human, manufactured, financial, and natural—be valued equally so that business, the environment, and social interests form an integrated system.

Elkington introduced in his book *Cannibals with Forks* the "triple bottom line" concept that many businesses have adopted as an operating principle. The traditional single bottom line of profit, Elkington says, is not sufficient for businesses to succeed in the 21st century. Instead, businesses must consider the social bottom line, the economic bottom line, and the environmental bottom line, all of which are intertwined and inseparable.

"You're not going to have a revolution without a new set of theories," Waage says. These theories and methods, she says, along with the other evidence of a significant acceleration of the green economy, represent a tipping point for sustainability in business. Once viewed as an afterthought, an annoyance, or a nonentity by industry, sustainability is now often a focal point for businesses with which The Natural Step works, she says. "There are an increasing number of businesses that are saying, 'We want this to be our centerpiece.'" No longer thought of as a business cost, Waage says environmentally benign practices are now viewed by these companies as a competitive advantage.

It is this corporate shift, environmentalists say, that offers the most promise for moving the green economy from niche player to business as usual. In fact, says Paul Faeth, director of the World Resources Institute's (WRI) Economics and Population Program, corporations control so much of the world's resources (by some accounts, of the 100 largest economic actors in the world, 50 are countries and 50 are corporations) that it is vital for big business to embrace sustainability. And this marriage has to be voluntary, Faeth says, because U.S. environmental regulations are weak, having changed little since the Carter administration. "There's nothing really from a legislative or administrative point of view that you can look at and say there have been any real successes," Faeth says. As a result, he says, in the last decade the WRI has turned its attention from legislative progress to industry involvement. "Six or seven years ago we didn't have any work directly with corporations, and now we have a lot."

These new **green technologies** and new, greener applications of existing technologies reflect the **growing attitude** that progressive environmental practices are a competitive advantage rather than a cost.

—Joanna Underwood, INFORM

The Pressure to Sustain

Why are more corporations now welcoming sustainability? Elkington identifies five driving forces. First, because social responsibility has become an important screen for many mutual funds, companies that shun sustainability risk reducing demand for their stocks and therefore lowering stock prices. Second, companies are increasingly sensitive to public relations, and the media more readily pick up stories of environmental irresponsibility. Third, there are at least some new environmental regulations, particularly in Europe. Not only do these regulations affect behavior within companies operating nationally, they also spur multinational companies to meet the standards of their strictest markets rather than make an array of products to meet disparate standards. "Our philosophy is that we will operate the same anyplace in the world," says Dawn Rittenhouse, DuPont Corporation's director of sustainable development. "Our safety standards hold. Our environmental standards hold. And we wouldn't sell a product in Asia that we couldn't legitimately and safely sell in the United States." Fourth, peer pressure among top managers of different companies inspires one to meet the policies of others. "Some of them are doing interesting stuff, and others aren't, and those who aren't begin to feel just slightly exposed," Elkington says. And finally, companies need to placate existing and potential employees who are interested in environmental issues. In fact, Elkington says, the best and brightest recruits are often those most interested in environmentalism.

According to Christine Rosen, an historian and associate professor of business and public policy at the University of California at Berkeley, the source of corporate acceptance of sustainability lies in a combination of demographics and new business strategies. "I think it's partly the new generation of managers who are much more open and tend to be environmentalists themselves who are starting to recognize that you need to do this because it's an ethical obligation [and] that there's also a competitive advantage," Rosen says. "If you're going to be prepared for the future, you better be on the leading edge of the learning curve. You're going to have an advantage when global warming really starts to bite if you're prepared to deal with these problems and not rooted in the past digging in your heels."

Another factor, Faeth says, is that unlike 10 or 20 years ago, the public today holds businesses accountable for the environmental impacts they cause. "Companies are worried about their customer base and what their customers' expectations are evolving to be, and that is evolving to be greener, greener, and greener," he says.

Encouraged by industry's increasing acceptance of sustainability and frustrated by slow progress on the regulatory front, Faeth says, some environmental groups are shifting their focus from advocating green legislation to stimulating green commerce. "We are very interested in market-based

Christopher G. Reuther/EHP

approaches," says Faeth. The WRI is managing programs to create markets that are intended to decrease waterway-clogging nutrients, decrease the release of greenhouse gases, and increase the use of green power.

For example, the WRI's nutrient trading program is an attempt to increase the effectiveness of some aspects of the federal Clean Water Act. "There are three thousand waterways in the United States that are impaired by nutrients," Faeth says. Nutrients such as nitrate, ammonia, and phosphorus from such sources as agricultural fertilizers and detergents have the largest impact on U.S. water quality because they can accelerate eutrophication in lakes and streams, resulting in algal blooms, fish kills, and excessive aquatic weed growth. High concentrations of phosphorus and nitrogen in coastal areas can result in such low levels of dissolved oxygen, a condition called "hypoxia," that fish and other organisms cannot survive.

To control the levels of these nutrients, the Clean Water Act places a cap called a total maximum daily load (TMDL) on each body of water. Each TMDL is set through a lengthy and expensive process in which the watershed is modeled, stakeholders are consulted, and a plan to reduce nutrients is established. Typically, Faeth says, in the end most of the financial burden falls on point source polluters, such as factories, while overlooking nonpoint source polluters, typically farms. And that often results in lawsuits that cost polluters and the government money while delaying implementation of nutrient controls. Establishing a marketplace in which sources who are under the TMDL can sell credits to those who are over the limit, he says, would help stakeholders meet Clean Water Act standards. "What we find in the three case studies that we've done is that trading can reduce the cost between sixty and eighty percent," he says.

The WRI's Green Power Market Development Group will rely on similar principles, says Jennifer Layke, director of the group, as well as find other ways to encourage sustainable energy practices. Companies that use clean sources of energy will sell credits to companies that use more-polluting methods. "Our goal is to create corporate markets for one thousand megawatts of new cost-competitive green power capacity in the United States by the year two thousand ten," she says. "That represents a significant chunk of new renewables on the grid, approximately eight percent of the new companies' energy purchases. But it also represents the avoided emission equivalent of a one-thousand-megawatt coal-fired power plant."

This combination of voluntary programs driven by state and federal regulations is an important component of the growing green economy, says Jack Barkenbus, executive director of the Energy, Environment, and Resources Center at the University of Tennessee in Knoxville. The center has facilitated programs through which manufacturers would take responsibility for their products, including electronic devices, automobiles, and carpets, from production through disposal. "[The programs] are voluntary, but with the threat of action taking place by selected states," Barkenbus says, referring to potential further environmental regulations.

One such program is a carpet stewardship initiative. According to the U.S. Environmental Protection Agency (EPA), about 2.5 million tons of carpet are discarded each year, almost all of which ends up in landfills. One outcome of this initiative was an agreement signed on 8 January 2002 by carpet manufacturers, trade organizations, state governments, environmental organizations, and the EPA aimed at eliminating landfill disposal and incineration of used carpet.

DuPont Flooring Systems, a major carpet manufacturer, is developing a business aimed at selling carpet use rather than the carpet itself. This allows large companies more control over their processes, which in turn lets them reduce polluting waste. To this end, DuPont installs different types of carpet for different wear patterns, maintains it for customers, and at the end of the carpet's life removes it and takes it to a recycling facility in Chattanooga, Tennessee. There, the nylon "face" is shaved off and used for engineering polymers, most of which end up as car components. The rest of the carpet is recycled for a variety of applications, guaranteeing that none goes to the landfill, Rittenhouse says. "If you look at what's the single best thing that you can do for the environment, for any product," Rittenhouse says, "it's lengthening the useful life of it."

DuPont's effort to reduce the environmental footprint of its carpet fibers is part of a companywide strategy, Rittenhouse says, that dates back to a 1989 set of environmental goals that were designed to help the company reach the level of environmental responsibility that their customers wanted rather than just a level required by regulations. Today, all of DuPont's 18 business units (generating $28 billion a year) have some sort of initiative for sustainability that is meant to satisfy the public's expectations for sustainability, develop a competitive edge for the future, and save money now. "Anytime you bring materials into your facility and use those raw materials to make waste and emissions instead of making a product," Rittenhouse says, "it's costing money."

Growing Green Business

Companies that anticipate the demand for greener business will have an advantage over those that react to new environmental regulations as they are enacted, Faeth says. "When you're building a new facility, adding somewhat better technology is not that much more expensive," he says. "It's the retrofitting that kills you." The real drive, Elkington says, will come from new, smaller companies that can adapt to a rapidly changing, increasingly green marketplace.

Chief among industries whose rapid growth is driving the green economy as a whole is sustainable energy, says Layke. Globally, wind power is expanding faster than any other source of energy. In 1999 and 2000 more new wind power capacity became available than new nuclear capacity. In fact, wind power capacity is growing at 25–30% per year, reaching 23,000 megawatts at the end of 2001. Photovoltaic solar cell production is expanding by 25–40% per year, says Steve Hester, technical director of the Solar Electric Power Association, based in Washington, D.C. Other developing technologies, Layke says, include hydrogen fuel cells, which currently provide businesses such as hospitals with on-site, uninterruptible sources of electricity, and landfill gas–powered fuel cells, in which methane emitted from moldering refuse generates heat and electric power.

"These new green technologies and new, greener applications of existing technologies reflect the growing attitude that progressive environmental practices are a competitive advantage rather than a cost, [and] characterize the businesses that are driving the green economy," says Joanna Underwood, president of INFORM, an environmental research organization based in New York City. "When human ingenuity stays focused on the task of creating a waste-free, contamination-free, resource-efficient economy, we will get there. The question is, what kind of incentives are needed to stimulate that creativity, to make companies want to do this? The pressures, without any question, are growing."

Scott Fields